



UNITED STATES PATENT AND TRADEMARK OFFICE

A

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,065	03/26/2004	William Blake Kolb	55752US019	3514

7590 04/12/2005

Brian E. Szymanski
Office of Intellectual Property Counsel
3M Innovative Properties Company
P.O. Box 33427
St. Paul, MN 55133-3427

EXAMINER

RINEHART, KENNETH

ART UNIT	PAPER NUMBER
----------	--------------

3749

DATE MAILED: 04/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

2p

Office Action Summary	Application No.	Applicant(s)	
	10/810,065	KOLB, WILLIAM BLAKE	
	Examiner	Art Unit	
	Kenneth B Rinehart	3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/31/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8, 9, 12-18, 24-31, 33, 36-39, 41, 42, 48-51 are rejected under 35

U.S.C. 102(b) as being anticipated by Foote et al (5536333). Foote et al shows A process for dry converting a moving substrate of indefinite length comprising conveying the substrate through a dry converting station in a close enclosure while supplying the enclosure with one or more streams of conditioned gas flowing at a rate sufficient to reduce materially the particle count in the close enclosure (fig. 1, fig. 6, col. 11, lines 54-58), conveying the substrate through a series of interconnected close enclosures (fig. 1, fig. 6), conveying the substrate in a close enclosure or series of close enclosures through at least a first dry converting station in the process (fig. 1, fig. 6), conveying the substrate in a close enclosure or series of close enclosures through at least a last dry converting station in the process (fig. 1, fig. 6), conveying the substrate in a close enclosure or series of close enclosures from at least a first dry converting station in the process through at least a last dry converting station in the process (fig. 1, fig. 6), conveying the substrate in a close enclosure or series of close enclosures from at least a first dry converting station in the

Art Unit: 3749

process up to a takeup reel or up to or through a packaging station (120, fig. 1), at least two close enclosures have different pressures, temperatures, average headspaces or average footspaces (col. 12, lines 58-62), maintaining or establishing a positive pressure in at least one close enclosure and maintaining or establishing a negative pressure in at least one other close enclosure (126, 86, fig. 6), supplying conditioned gas streams to each in a series of interconnected close enclosures (74, 76, 78, fig. 6), sealing the moving substrate at the upstream and downstream ends of a series of interconnected close enclosures (fig. 6), maintaining a pressure gradient of at least about -0.5 Pa or higher in a close enclosure (col. 11, line 63), maintaining a positive pressure gradient in a close enclosure (86, fig. 6), the total of the average headspace and average footspace in a close enclosure is 10 cm or less (fig. 8), flowing a stream of conditioned gas at a rate sufficient to reduce a close enclosure particle count by 75% or more (col. 11, lines 54-58, fig. 6), flowing streams of conditioned gas at a rate sufficient to reduce the close enclosure particle counts by 90% or more fig. 6, col. 11, lines 54-58), a dry converting station and substrate-handling equipment for conveying the substrate through the dry converting station (fig. 6), the substrate being enveloped in the dry converting station by a close enclosure supplied with one or more streams of conditioned gas flowing at a rate sufficient to reduce materially the particle count in the close enclosure (fig. 1, fig. 6, col. 11, lines 54-58), the substrate is conveyed through a series of interconnected close enclosures (fig. 1, fig. 6), the substrate is enveloped by a close enclosure or series of close enclosures through at least a first dry converting station in the apparatus (fig. 1, fig. 6), the substrate is enveloped by a close enclosure or series of close enclosures through at least a last dry converting station in the apparatus (fig. 1, fig. 6), the substrate is enveloped by a close enclosure or series of close

Art Unit: 3749

enclosures from at least a first dry converting station in the apparatus through at least a last dry converting station in the apparatus (fig. 1, fig. 6), at least two close enclosures have different average headspaces or average footspaces (126, 186, fig. 6), conditioned gas streams are supplied to each in a series of interconnected close enclosures (fig. 6), seals with respect to the moving substrate at the upstream and downstream ends of a series of interconnected close enclosures (fig. 6), a close enclosure has a pressure gradient of at least about -0.5 Pa or higher (col. 11, line 63), connecting first and second enclosures (86, 76, fig. 6) having a material difference in their respective operating pressures via a close enclosure comprising a transition zone (78, fig. 6), there is a ten-fold or greater pressure difference between atmospheres in the first and second enclosures (fig. 6, col. 11, line 63), a close enclosure has a positive pressure gradient (86, fig. 6), wherein there is a ten-fold or greater pressure difference between atmospheres in the first and second enclosures (86, 126, fig. 6), the total of the average headspace and average footspace in a close enclosure is 10 cm or less (fig. 8), conveying the substrate through a dry converting station in a close enclosure while supplying the enclosure with one or more streams of conditioned gas flowing at a rate sufficient to cause a material change in a physical property of interest for the atmosphere in the close enclosure (fig. 6), a dry converting station and substrate-handling equipment for conveying the substrate through the dry converting station, the substrate being enveloped in the dry converting station by a close enclosure supplied with one or more streams of conditioned gas flowing at a rate sufficient to cause a material change in a physical property of interest for the atmosphere in the close enclosure (fig. 6), first and second enclosures (86, 76, fig. 6) having a material difference in their respective operating

Art Unit: 3749

pressures connected by a close enclosure comprising a transition zone between the first and second enclosures (78, fig. 6).

Claims 1, 7, 26, 32, rejected under 35 U.S.C. 102(e) as being anticipated by Jackson (6656017). Jackson shows A process for dry converting a moving substrate of indefinite length comprising conveying the substrate through a dry converting station in a close enclosure while supplying the enclosure with one or more streams of conditioned gas flowing at a rate sufficient to reduce materially the particle count in the close enclosure (col. 3, lines 41-50, fig. 3a, col. 1, lines 46-52), conveying the substrate in a close enclosure or series of close enclosures from a cabinet containing an unwind reel to a cabinet containing a takeup reel (fig. 6b), a dry converting station and substrate-handling equipment for conveying the substrate through the dry converting station, the substrate being enveloped in the dry converting station by a close enclosure supplied with one or more streams of conditioned gas flowing at a rate sufficient to reduce materially the particle count in the close enclosure (col. 3, lines 41-50, fig. 3a, col. 1, lines 46-52), the substrate is enveloped in a close enclosure or series of close enclosures from a cabinet containing an unwind reel to a cabinet containing a takeup reel (fig. 6b).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10, 11, 19-23, 34-35, 43-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson (6656017). Jackson discloses A process for dry converting a moving

Art Unit: 3749

substrate of indefinite length comprising conveying the substrate through a dry converting station in a close enclosure while supplying the enclosure with one or more streams of conditioned gas flowing at a rate sufficient to reduce materially the particle count in the close enclosure (col. 3, lines 41-50, fig. 3a, col. 1, lines 46-52), a dry converting station and substrate-handling equipment for conveying the substrate through the dry converting station, the substrate being enveloped in the dry converting station by a close enclosure supplied with one or more streams of conditioned gas flowing at a rate sufficient to reduce materially the particle count in the close enclosure (col. 3, lines 41-50, fig. 3a, col. 1, lines 46-52), supplying a conditioned gas stream to at least the first in a ... close enclosures whereby the conditioned gas is carried along with the moving substrate to a downstream close enclosure or pushed to an upstream enclosure or process, a conditioned gas stream is supplied to at least the first in a ... close enclosures and the conditioned gas is carried along with the moving substrate to a downstream close enclosure or pushed to an upstream enclosure or process. (fig. 4b, Gas will inherently be carried along or be pushed.), supplying conditioned gas streams to a ... of close enclosures and withdrawing gas from a ... of close enclosures, conditioned gas streams are supplied to a ... of close enclosures and gas streams are withdrawn from a ... of close enclosures (fig. 4b), the total of the average headspace and average footspace in any a close enclosure is..., the total of the average headspace and average footspace in any close enclosure is ... (fig. 3a), a first chamber having a gas introduction device is positioned near a control surface (fig. 4b), a ... chamber having a gas withdrawal device is positioned near the control surface (fig. 4b), the control surface and first and ... together define a region wherein adjacent gas phases possess an amount of mass (gases inherently have mass) , at least a portion of the mass from the adjacent gas phases is transported

Art Unit: 3749

through the gas withdrawal device by inducing a flow through the region (fig. 4b), and the mass flow can be segmented into the following components: M1 means total net time-average mass flow per unit of substrate width into or out of the region resulting from pressure gradients (Inherently occurs), M1' means the total net time-average mass flow of a gas per unit width into the region through the first chamber from the gas introduction device (Inherently occurs), M2 means the time-average mass flow of conditioned gas per unit width from or into the at least one major surface of the substrate into or from the region (inherently occurs), M3 means total net time-average mass flow per unit width into the region resulting from motion of the material (Inherently occurs), and M4 means time-average rate of mass transport through the gas withdrawal device per unit width (fig. 4b, Inherently occurs), M1 has a value less than zero and greater than ... kg/second/meter, wherein M1 has a value less than zero and greater than ... kg/second/meter (Inherently there is flow). Jackson discloses applicant's invention substantially as claimed with the exception of series of interconnected, plurality, 5 cm or less, 3 cm or less, second. At the time the invention was made it would have been an obvious matter of design choice to a person of ordinary skill in the art to have of series of interconnected, plurality, 5 cm or less, 3 cm or less, second because applicant has not disclosed that the number of enclosures, or chambers, or height of the headspace or footspace provides an advantage, is used for a particular purpose or solves a stated problem, -0.25, -0.10. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either the number of enclosures or chambers, or height, or flow of Jackson or the claimed number and height, or flow because both quantities and lengths perform the same function of processing the substrate in a conditioned micro-environment equally well.

Art Unit: 3749

Conclusion

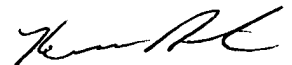
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B Rinehart whose telephone number is 571-272-4881.

The examiner can normally be reached on 7:20 -4:20.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 571-272-4881. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

kbr


KENNETH RINEHART
PRIMARY EXAMINER